WATER QUALITY REPORT

for

TULARE COUNTY
SOUTH COUNTY DETENTION FACILITY

Tulare County, California

March 2013

Prepared by

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PROVOST& PRITCHARD
CONSULTING GROUP
An Employee Owned Company

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Visalia, CA 93291

Table of Contents

Executive Summary 1
Section 1 – Introduction 2
1.1 - Introduction 2
1.2 - Description of the Proposed Project 2
1.3 – General Findings from the 2030 General Plan EIR 2
Section 2 – Existing Conditions 7
2.1 – Regional Setting 7
2.2 – Local Setting 11
Section 3 – Regulatory Plans and Policies 21
3.1 – Federal Regulations 21
3.2 – State Regulations 23
3.3 – Local Regulations 24
Section 4 – Environmental Analysis 29
4.1 – Thresholds of Significance 29
4.2 – Project Impacts 29
4.3 - Cumulative Impacts 35
4.4 - Level of Significance After Mitigation 35

List of Figures

FIGURE 1 - REGIONAL LOCATION 4
FIGURE 2 - PROJECT LOCATION 5
FIGURE 3 - TOPOGRAPHIC MAP 6
FIGURE 4 - TULE SUBBASIN LOCATION 9
FIGURE 5 - FEMA FLOODPLAIN MAP 13
FIGURE 6 - DWR GROUNDWATER MAP 14
FIGURE 7 – WELL LOCATIONS NEAR AIRPORT 15
FIGURE 8 – ENVIRONMENTAL CLEANUP SITE MAP 17
FIGURE 9 – SOIL MAP 19

Executive Summary

The purpose of this Water Quality Report is to identify the existing hydrology and water quality in the vicinity of the City of Porterville South County Detention Facility. Both project and cumulative potential impacts are identified, and feasible mitigation measures are developed, as applicable.

The Project will be located on an approximately 18.46 acre site in the Porterville, California area. The Project will be built to utilize city water and sewer services. The Project site is characterized by relatively flat vacant and disturbed land. The soil is 100 percent Exeter loam, which is moderately well drained.

The climate is well suited for farming. Runoff from the Sierra Nevada provides good quality water for irrigation along with local groundwater. Nearly all of the year's precipitation falls in the six months from November to April. The mean annual precipitation in the valley portion of the region ranges from about 6 to 11 inches.

Groundwater recharge is primarily from stream recharge and from deep percolation of applied irrigation water. The status of the groundwater basin is currently overdrafted in average-year and dry-year conditions. As of 2008, groundwater levels have declined moderately – on average 0.75 feet per year over the last 20 years.

The Tule River, which flows west approximately 1 mile north of the Project, is one of the principal watercourses in Tulare County. Under normal conditions, discharge in the Tule River is regulated by Success Dam. No waterways exist on the Project site. The Project is located outside of both the 100- and 500-year flood zones.

In general, groundwater flows to the west with a decreasing gradient away from the Sierra Nevada. There is a localized groundwater depression near the southwest area of the Project which will likely cause the groundwater beneath to flow in that direction.

Groundwater quality in the Porterville area is generally better on the western edge. A few wells have been shut down due to water quality problems and a few wells in the downtown area have experienced nitrate problems. All active municipal wells produce water that meets State and Federal drinking water quality standards.

Other than the Porterville Airport, there are no hazardous waste sites within a one mile radius of the Project. There is a Superfund site located within two miles of the Project; the plume has been remediated to below cleanup levels.

The construction of Success Lake Dam was completed in 1961. The dam is overseen and maintained by the United States Army Corps of Engineers. Reservoir capacity is 82,300 acre-feet of water with a surface area of 2,450 acres. Based on the reservoir at full capacity, the proposed Project is not located within the Success Dam inundation area.

The Evaluation of Environmental Impacts pursuant to Appendix G of the *State CEQA Guidelines* determined that potential hydrological and water quality impacts would be less than significant with no mitigation required.

Section 1 – Introduction

1.1 - Introduction

The purpose of this Water Quality Report (**Report**) is to identify the existing hydrology and water quality in the vicinity of the City of Porterville for the South County Detention Facility (**Project**). Both project and cumulative potential impacts are identified, and feasible mitigation measures are developed, as applicable. This Report discusses regional and local surface and groundwater conditions including floodplain, dam safety, and inundation hazards.

This Report was prepared using information contained in the City of Porterville 2030 General Plan[1]and the Water Quality Control Plan for the Tulare Lake Basin.[2], Department of Water Resources Bulletin 118, U.S. Department of Agriculture, Natural Resource Conservation Service, *Web Soil Survey,* and the City of Porterville Consumer Confidence Reports, among others.

In addition, a site-specific hydrogeologic investigation was conducted by Consolidated Testing Laboratories, Inc. (**CTL**). The CTL report information is utilized as appropriate.

1.2 - Description of the Proposed Project

The new South County Detention Facility will be located on an approximately 18.46 acre site located on the northwest corner of the intersection of Road 232 (Newcomb) and Avenue 136 (Scranton) in the Porterville, California area (**Figures 1 and 2**). The Project will be built as a 500 bed Type II detention facility. Support space for food and laundry services, medical, storage, and program space will also be incorporated into the facility.

The Detention Facility and all components to support the facility will require approximately 120,000 square feet, and will be built with city water and sewer service. The Project site is characterized by vacant and disturbed land that is relatively flat, with a gentle slope to the west (**Figure 3**).

1.3 – General Findings from the 2030 General Plan EIR

Construction and post-construction activities associated with implementation of the approved 2030 General Plan could result in specific storm drainage, wastewater, water quality, and flooding impacts, such as increased nonpoint pollutant discharges, alterations to the drainage patterns by increasing impervious surface area, and alterations to flood patterns by increasing development within the floodplain. These impacts are considered less than significant given the regulatory requirements and standards with which existing and future development are required to comply. These requirements would include:

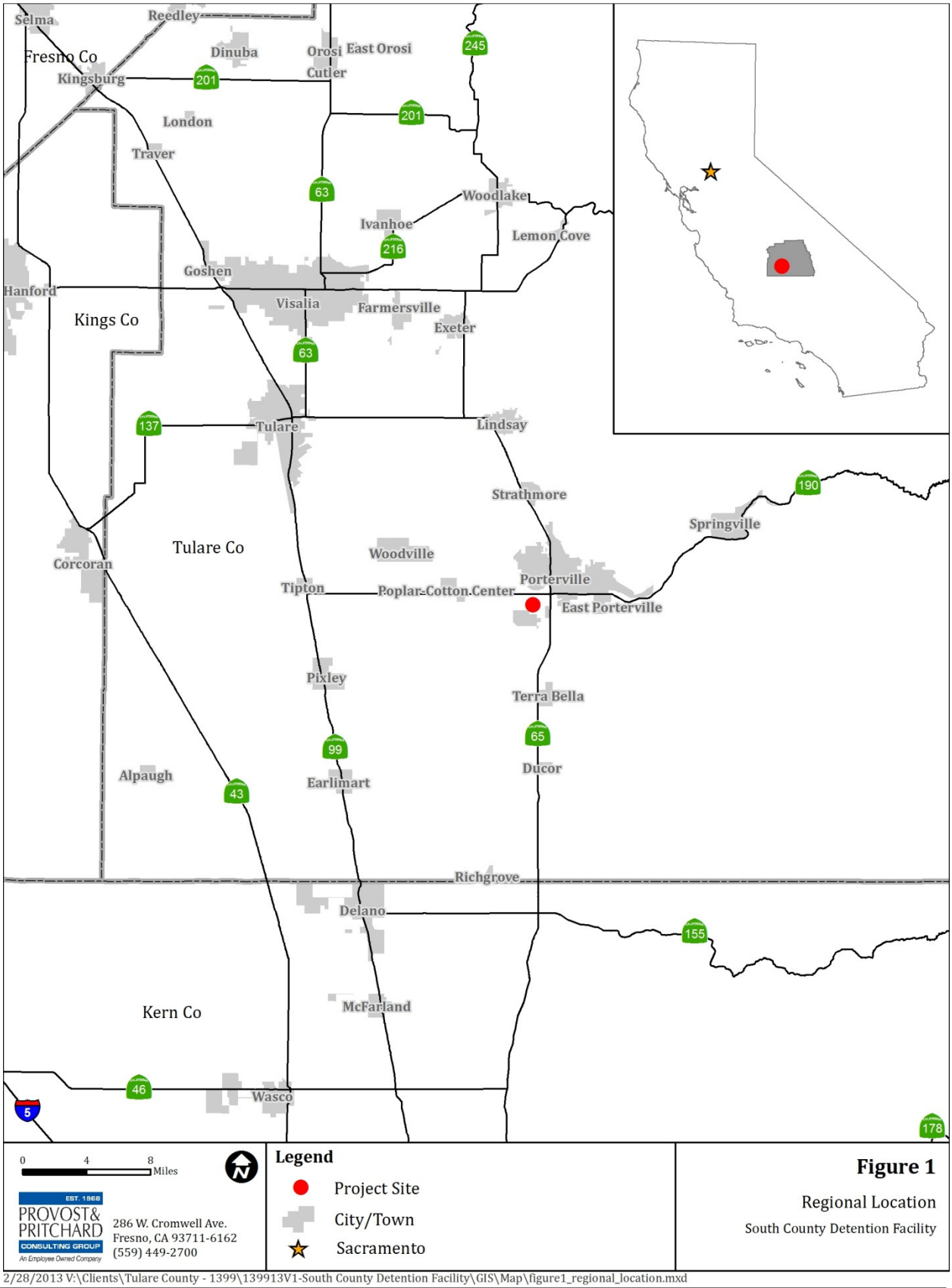
[1] City of Porterville, *2030 General Plan*, March 2008.

[2] Central Valley Regional Water Quality Control Board, Water Quality Control Plan for the Tulare Lake Basin, 2004.

- Guiding Policy OSC-G-8, which states, "ensure adequate water quality and supply for the entire Porterville community,"[3] and
- Guiding Policy PHS-G-2, which states, "protect the community from risks to life and property posed by flooding and stormwater runoff."[4]

Additionally, general plan policies have been proposed to ensure impacts remain less than significant. Implementation of the policies was found to reduce potential impacts on hydrology and water quality to less than significant.

[3] City of Porterville, *2030 General Plan,* "Open Space and Conservation Element," (2008), 134.
[4] Ibid., *Porterville 2030 General Plan*, "Public Health and Safety Element," (2008), 162.


Selma
Reedley
Fresno Co
Dinuba
Orosi
East Orosi
Cutler
Kingsburg
245
201
London
Traver
63
Woodlake
Ivanhoe
Lemon Cove
216
Goshen
Hanford
Visalia
Farmersville
Kings Co
Exeter
63
137
Tulare
Lindsay
Strathmore
190
Springville
Tulare Co
Corcoran
Woodville
Porterville
Tipton
Poplar-Cotton Center
East Porterville
Pixley
Terra Bella
65
99
Ducor
Alpaugh
43
Earlimart
Richgrove
Delano
155
Kern Co
McFarland
46
Wasco
5
178
0
4
8
Miles
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CONSULTING GROUP
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286 W. Cromwell Ave.
Fresno, CA 93711-6162
(559) 449-2700
Legend
Project Site
City/Town
Sacramento
Figure 1
Regional Location
South County Detention Facility
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Newcomb/Road232
302-080-066
302-080-065
Scranton/Avenue 136
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community
0 500 1,000 Feet
Legend
Project Site
Figure 2
Project Location
South County Detention Facility
PROVOST& PRITCHARD CONSULTING GROUP
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An Employee Owned Company
286 W. Cromwell Ave.
Fresno, CA 93711-6162
(559) 449-2700
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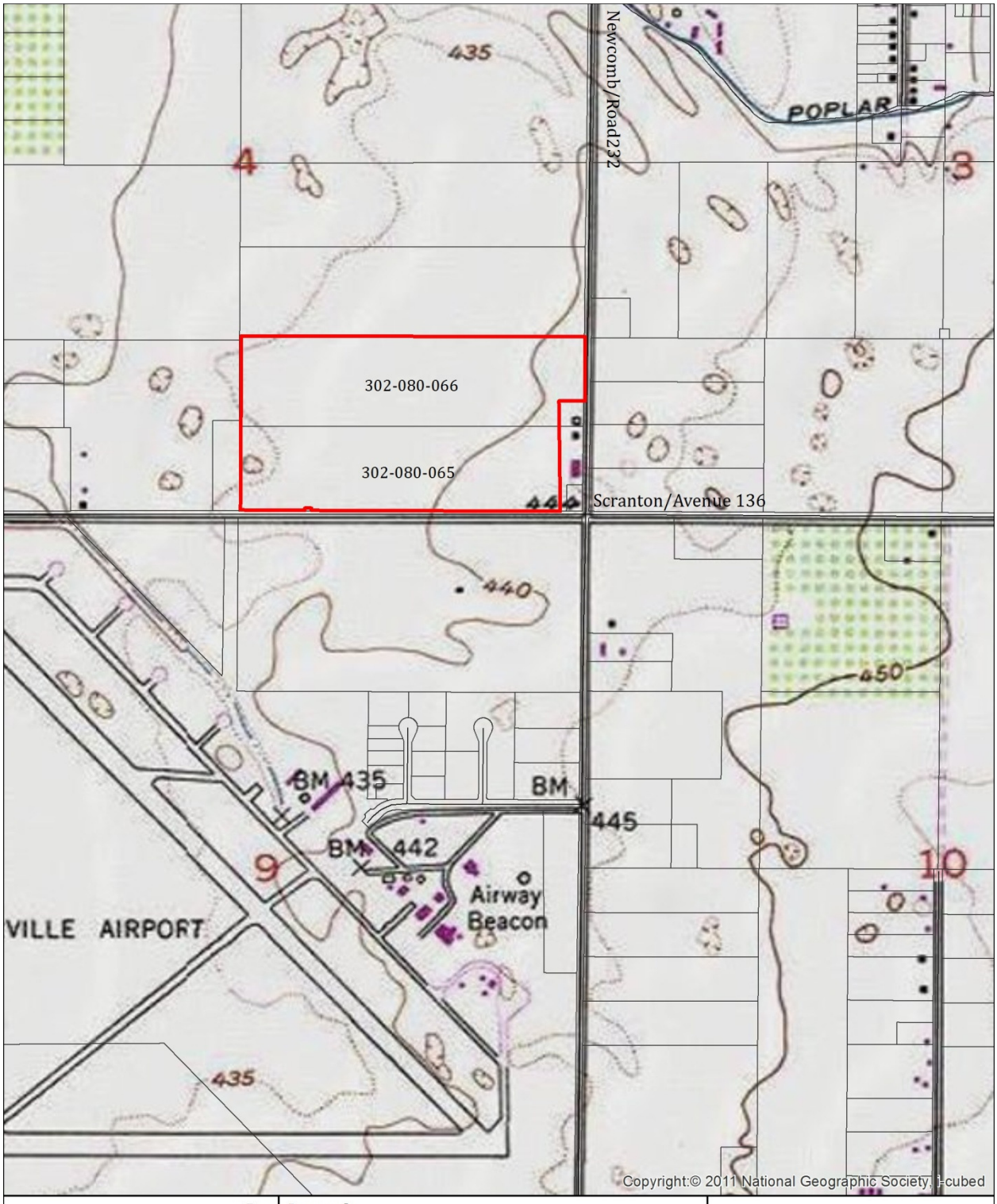

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Legend

Project Site

Porterville Quad (1:24,000)
PLSS: T22S R27E, S4 (S 1/2 of SE 1/4)

Figure 3

Topographic Map

South County Detention Facility

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Section 2 – Existing Conditions

2.1 – Regional Setting

2.1.1 - Climate

The climate in combination with the fertile soil in the valley portion of the region is well suited for farming. Runoff from the adjacent Sierra Nevada provides good quality water for irrigation along with local groundwater. The San Joaquin Valley's long growing season (April through October), warm/hot summers, and a fall harvest period usually sparse in rain provides a near ideal environment for production of many crops. Winters are moist and often blanketed with tule fog. Nearly all of the year's precipitation falls in the six months from November to April. The valley floor is surrounded on three sides by mountain ranges, resulting in a comparative isolation of the valley from marine effects. Because of this and the comparatively cloudless summers, normal maximum temperature advances to a high of 101 degrees Fahrenheit during the latter part of July. Valley winter temperatures are usually mild, but during infrequent cold spells air temperature occasionally drops below freezing. Heavy frost occurs during the winter in most years, and the geographic orientation of the valley generates prevailing winds from the northwest. [5]

The mean annual precipitation in the valley portion of the region ranges from about 6 to 11 inches, with 67 percent falling from December through March, and 95 percent falling from October through April. The region receives more than 70 percent of the possible amount of sunshine during all but four months, November through February. Tule fog, which can last up to two weeks, reduces sunshine to a minimum.[6]

2.1.2 - Watershed

The proposed project is located in the Tulare Lake Basin portion of the Central Valley Region. This watershed comprises the drainage area of the San Joaquin Valley south of the San Joaquin River**.** Surface water from the Tulare Lake Basin only drains north into the San Joaquin River in years of extreme rainfall. This essentially closed basin is situated in the topographic horseshoe formed by the Diablo and Temblor ranges on the west, by the San Emigdio and Tehachapi Mountains on the south, and by the Sierra Nevada Mountains on the east and southeast. The Basin encompasses approximately 10.5 million acres, of which approximately 3.25 million acres are in federal ownership including Kings Canyon and Sequoia National Parks and substantial portions of Sierra, Sequoia, Inyo, and Los Padres National Forests[7].

Valley floor lands, those having a land slope of less than 200 feet per mile, make up slightly less than one-half of the total basin land area. The maximum length and width of the Basin are

[5] Department of Water Resources, *California Water Plan Update 2009 Public Draft: Chapter 8 Tulare Lake Hydrologic Region,* http://www.waterplan.water.ca.gov/. 2009
[6] Ibid.
[7] Central Valley Regional Water Quality Control Board, *Water Quality Control Plan for the Tulare Lake Basin Second Addition,* Revised January 2004

about 170 miles and 140 miles, respectively. The valley floor is approximately 40 miles in width near its southern end, widening to a maximum of 90 miles near the Kaweah River.[8]

2.1.3 - Groundwater

The proposed project is further located in the Tule Subbasin of the San Joaquin Valley Groundwater Basin of the Tulare Lake Hydrologic Region. The Tule Subbasin is generally bounded on the west by the Tulare County line, and to the north concurrent with the northern Lower Tule and Porterville Irrigation Districts. The eastern boundary is at the edge of the alluvium and crystalline bedrock of the Sierra Nevada foothills, and the southern boundary is the Tulare-Kern County line (**Figure 4**).[9]

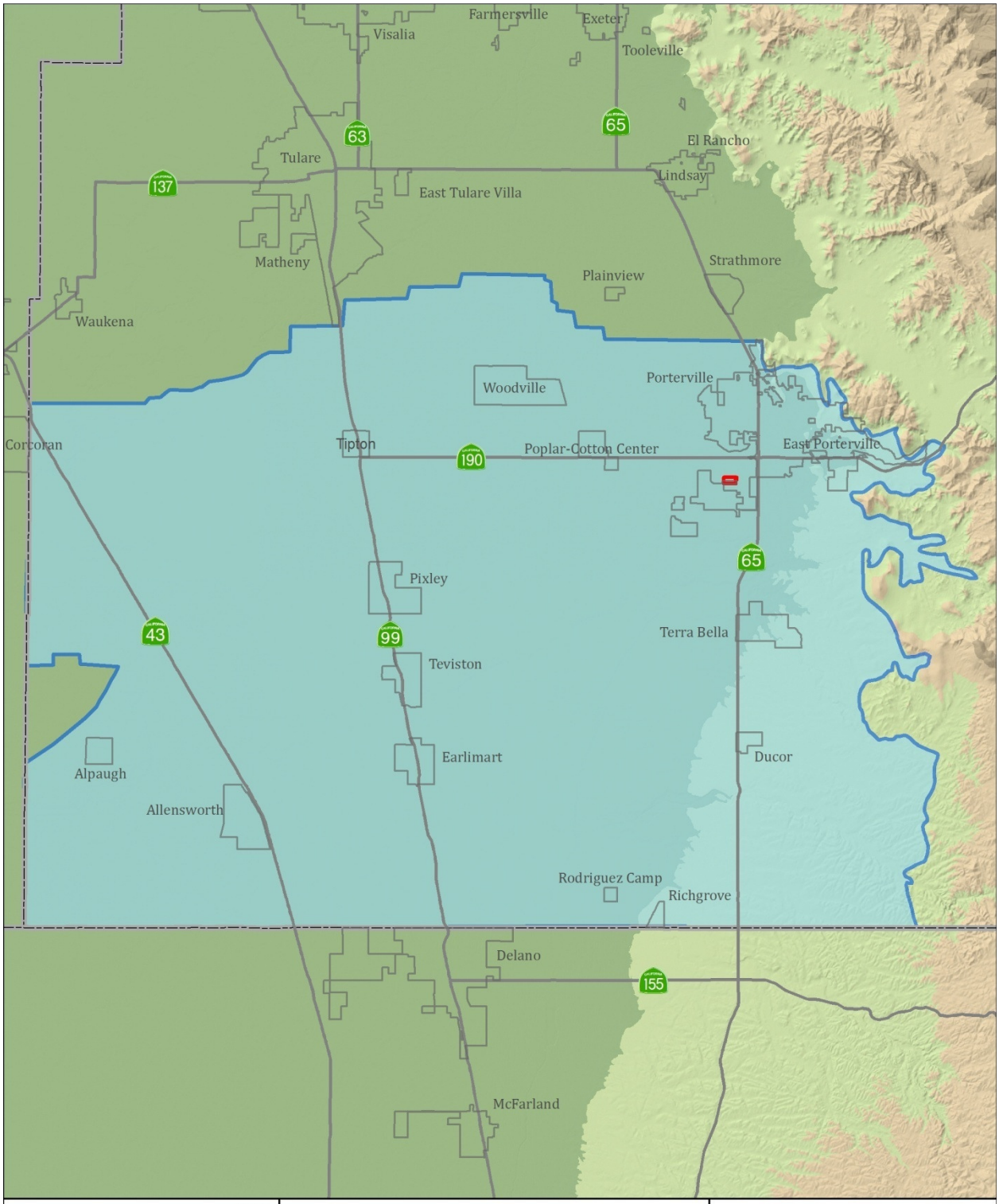
2.1.4 - Water Bearing Formations

The sediments that comprise the subbasin's aquifer are continental deposits of Tertiary and Quaternary age (Pliocene to Holocene). These deposits include flood-basin deposits, younger alluvium, older alluvium, the Tulare Formation, and continental deposits undifferentiated. The flood-basin deposits consist of relatively impermeable silt and clay interbedded with some moderately to poorly permeable sand layers that interfinger with the younger alluvium. These deposits are probably not important as a source of water to wells but may yield sufficient supplies for domestic and stock use. The younger alluvium is a complex of interstratified and discontinuous beds of unsorted to fairly well sorted clay, silt, sand, and gravel, comprising the materials beneath the alluvial fans in the valley and stream channels. Where saturated, the younger alluvium is very permeable, but this unit is largely unsaturated and probably not important as a source of water to wells. The older alluvium consists of poorly sorted deposits of clay, silt, sand, and gravel. This unit is moderately to highly permeable and is a major source of water to wells. [10]

The Tulare Formation consists of poorly sorted deposits of clay, silt, sand, and gravel derived predominately from the Coast Ranges. It contains the Corcoran Clay Member, the major confining bed in the subbasin. The formation is moderately to highly permeable and yields moderate to large quantities of water to wells. The continental deposits undifferentiated consist of poorly sorted lenticular (lens-shaped) deposits of clay, silt, sand, and gravel derived from the Sierra Nevada. The unit is moderately to highly permeable and is a major source of ground water in the subbasin. The estimated average specific yield for this subbasin is 9.5 percent. This estimation is based on Department of Water Resources (**DWR**) San Joaquin District internal data. Land subsidence of 12 to 16 feet due to deep compaction of fine-grained units has occurred in the subbasin.[11]

On average, the subbasin water level has increased about 4 feet from 1970 through 2000. The period from 1970 to 1978 showed a general decline, bottoming out at 13 feet below 1970 levels

[8] Central Valley Regional Water Quality Control Board, *Water Quality Control Plan for the Tulare Lake Basin Second Addition,* Revised January 2004
[9] Department of Water Resources, *California's Groundwater:* Bulletin 118, Update 2003, "Tule Subbasin," 2003
[10] Ibid
[11] Ibid


Farmersville
Exeter
Visalia
Tooleville
65
63
El Rancho
Tulare
Lindsay
137
East Tulare Villa
Matheny
Strathmore
Plainview
Waukena
Woodville
Porterville
Corcoran
Tipton
190
Poplar-Cotton Center
East Porterville
65
Pixley
43
99
Terra Bella
Teviston
Earlimart
Ducor
Alpaugh
Allensworth
Rodriguez Camp
Richgrove
Delano
155
McFarland
0 2.5 5 Miles
Legend
Project Site
Tule SubBasin
Figure 4
Location Of The Tule SubBasin
South County Detention Facility
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in 1978. There is a steep increase in water levels in the 10-year period from 1978 to 1988, topping out at 20 feet above 1970 water levels in 1988. There is a very sharp decrease in water levels of 34 feet from 1988 to 1995, with the lowest level reached in 1993 at 16 feet below 1970 water levels. From 1995 to 2000, water levels generally increased, eventually reaching 4 feet above 1970 water levels in 2000.[12] In general, as of 2008, groundwater levels have declined moderately – on average 0.75 feet per year over the last 20 years.[13]

Groundwater recharge is primarily from stream recharge and from deep percolation of applied irrigation water. The natural recharge into the subbasin is estimated at 34,400 acre-feet. Artificial recharge and subsurface inflow are not determined. There is about 201,000 acre-feet of applied water recharge into the subbasin. Annual urban extraction and annual agricultural extraction are estimated to be 19,300 acre-feet and 641,000 acre-feet, respectively. [14] The status of the groundwater basin is currently overdrafted in average-year and dry-year conditions.

2.1.5 - Floodplain

The Federal Emergency Management Agency (**FEMA**) Flood Insurance Rate Maps (**FIRM**) illustrates the risk of flooding.[15] These maps are useful for determining if an area is subject to flooding from a 100-year storm event, or base flood. The base flood has a 1 percent chance of being equaled or exceeded in any given year.

Zone A is the flood insurance rate zone that corresponds to the 1 percent annual chance floodplains (100-year zone) determined by the flood insurance study.[16] Because detailed hydraulic analyses are not performed for such areas, no base flood elevations or depths are shown within this zone.

Zone X is the flood insurance rate zone designation that applies to areas outside the 1 percent annual chance floodplain, areas of 1 percent annual chance sheetflow flooding where average depths are less than 1 foot, areas of 1 percent annual chance stream flooding where the contributing drainage area is less than one square mile, or areas protected from the 1 percent annual chance flood by levees.[17] No base flood elevations or depths are shown within this zone.[18]

The last zone designation, X500, applies to areas of moderate flood hazard from the principal source of flood in the area and areas determined to be between the limits of the 1 percent annual chance floodplain and the 0.2 percent annual chance floodplain (500-year zone)[19].

[12] Ibid
[13] City of Porterville, *2030 General Plan, Chapter 8: Public Utilities*, 2008
[14] Department of Water Resources, *California's Groundwater:* Bulletin 118, Update 2003, "Tule Subbasin," 2003
[15] Federal Emergency Management Agency (FEMA), "Map Service Center," 2008.
[16] FEMA. "Definitions of FEMA Flood Zone Designations," 2009
[17] Ibid
[18] Ibid
[19] First American Flood Data Services, "Definitions of FEMA flood Zone Designations," http://fafds.floodcert.com /images/main/Flood%20Zone%20Designations%20-%20Lenders.pdf, 2008.

Small portions of the City of Porterville are located in the 100-year zone and the 500-year zone. These two floodplains closely correspond to the watercourses that flow through the city.[20] The Project is located outside of both zones.

2.2 – Local Setting

2.2.1 - Hydrology

The local watershed is the Tule Delta Hydrologic Area, located within the South Valley Floor Hydrologic Unit within the Tulare Lake Basin.[21] The Tule River, which flows west approximately 1 mile north of the Project, is one of the principal watercourses in Tulare County. Under normal conditions, discharge in the Tule River is regulated by Success Dam, located approximately 7 miles upstream (east) from the Project. Porter Slough is another natural tributary of the Tule River but is separated from the Project by the Tule River. No waterways exist on the Project site.

Seven ditch companies divert water from the Tule River and/or Porter Slough at points within the City: Pioneer, Campbell-Moreland, Porter Slough, Vandalia, Poplar, Hubbs-Miner, and Woods-Central. In addition to delivering water for irrigation, these ditches also provide extra capacity to carry peak flood flows and urban storm water runoff. The Friant-Kern Canal defines the western edge of the City. Water in the canal is imported from the San Joaquin River northeast of Fresno and distributed to the western portion of the City by the Porterville Irrigation District[22].

2.2.2 - Floodplain

Porterville is in the Tulare County Flood Control District (**TCFCD**). The TCFCD has historically participated in joint efforts with the United States Geological Society (**USGS**) for water resource investigations within Tulare County. The TCFCD uses this information to help determine flood hazards and water resource information for downstream areas.[23]

In the City of Porterville, storm and urban runoff drainage is provided by the natural rivers and watercourses, irrigation ditches, storage reservoirs, and discharge locations. The City generally maintains drainage facilities within the public right-of-way, on public easements, and on property owned in fee by the City. Drainage facilities within the City are adequate to accommodate the project and all other existing development, but will require upgrades as General Plan buildout occurs.[24] Components of the drainage system on private property, or within private drainage easements, are maintained by the underlying property owner or other private party.[25]

[20] City of Porterville, *2030 General Plan, Public Health & Safety Element*, 1998
[21] Central Valley Regional Water Quality Control Board, *Tulare Lake Hydrologic Basin Planning Area Map*, 1986.
[22] City of Porterville, *2030 General Plan*, 2008
[23] Tulare County Flood Control District, *Agenda Item, Joint Funding Agreement with USGS*, October 28, 2008
[24] City of Porterville, *2030 General Plan, Chapter 8: Public Utilities*, 2008
[25] Ibid., Municipal Code, Chapter 19A, Article 1, *Private or Single Purpose Storm Drains*

The City of Porterville diverts and manages surface water within the public ROW, public easements, and on property owned in fee by the City.[26] The City's existing municipal storm drainage system consists of two natural channels, six irrigation ditches, eight major storage reservoirs, and 14 detention/retention basins with approximately 550 acre-feet of storage within the City limits.[27] To mitigate the increased runoff due to urbanization, the City plans to concentrate on discharging storm water into storage reservoirs for detention, retention and recharge. Components of the drainage system on private property, or within private drainage easements, are maintained by the underlying property owner or other private party (i.e., ditch companies).[28] In addition to delivering water for irrigation, the private ditches provide extra capacity to carry peak flood flows and urban storm water runoff.

The climate is relatively arid and development continues to increase the amount of impervious surfaces, surface runoff, and storm drainage. Portions of the Tule River watershed, which contribute to flooding in the City, have a mean annual precipitation of 40 inches.[29]

As discussed in Section 2.1.5, the Project is located outside of the 100- and 500-year flood zones (Zone X and X500, respectively). As such, the Project is not considered to be in a special flood hazard area (**Figure 5**).

2.2.3 - Groundwater

The Porterville area is underlain by an unconfined aquifer; most aquifers lie at depths from 75 to 400 feet below ground surface.[30] The area receives groundwater recharge primarily from the Sierra Nevada; in addition, appreciable volumes of groundwater recharge occur due to seepage from the Tule River and irrigation ditches that divert water from the river. Percolation from rainfall and irrigation also contribute to the groundwater storage.

In general, groundwater flows to the west with a decreasing gradient away from the Sierra Nevada (**Figure 6**). There is a localized groundwater depression near the southwest area of the Project which will likely cause the groundwater beneath to flow in that direction. The cause of the depression is likely two City wells; well 22S27E09J001M located at the Porterville airport, and well 22S27E08B001M located approximately ½ mile west of the northern runway (**Figure 7**).[31]

Locally, groundwater recharge occurs along the channels of the Tule River as evidenced by a ridge of higher water table contours along the river. Irrigation districts occasionally recharge aquifers through the use of artificial basins and open land spreading, especially in wet years.[32]

[26] Ibid., *2030 General Plan*, 2008
[27] Ibid., *Storm Water Management Plan*, 2006
[28] City of Porterville, *Storm Water Management Plan*, 2006.
[29] Ibid, *2030 General Plan*, 2008.
[30] Ibid, *Urban Water Management Plan 2007 Update,* 2008.
[31] Department of Water Resources http://www.water.ca.gov/waterdatalibrary/groundwater/index.cfm
[32] City of Porterville, *Urban Water Management Plan 2007 Update,* 2008.

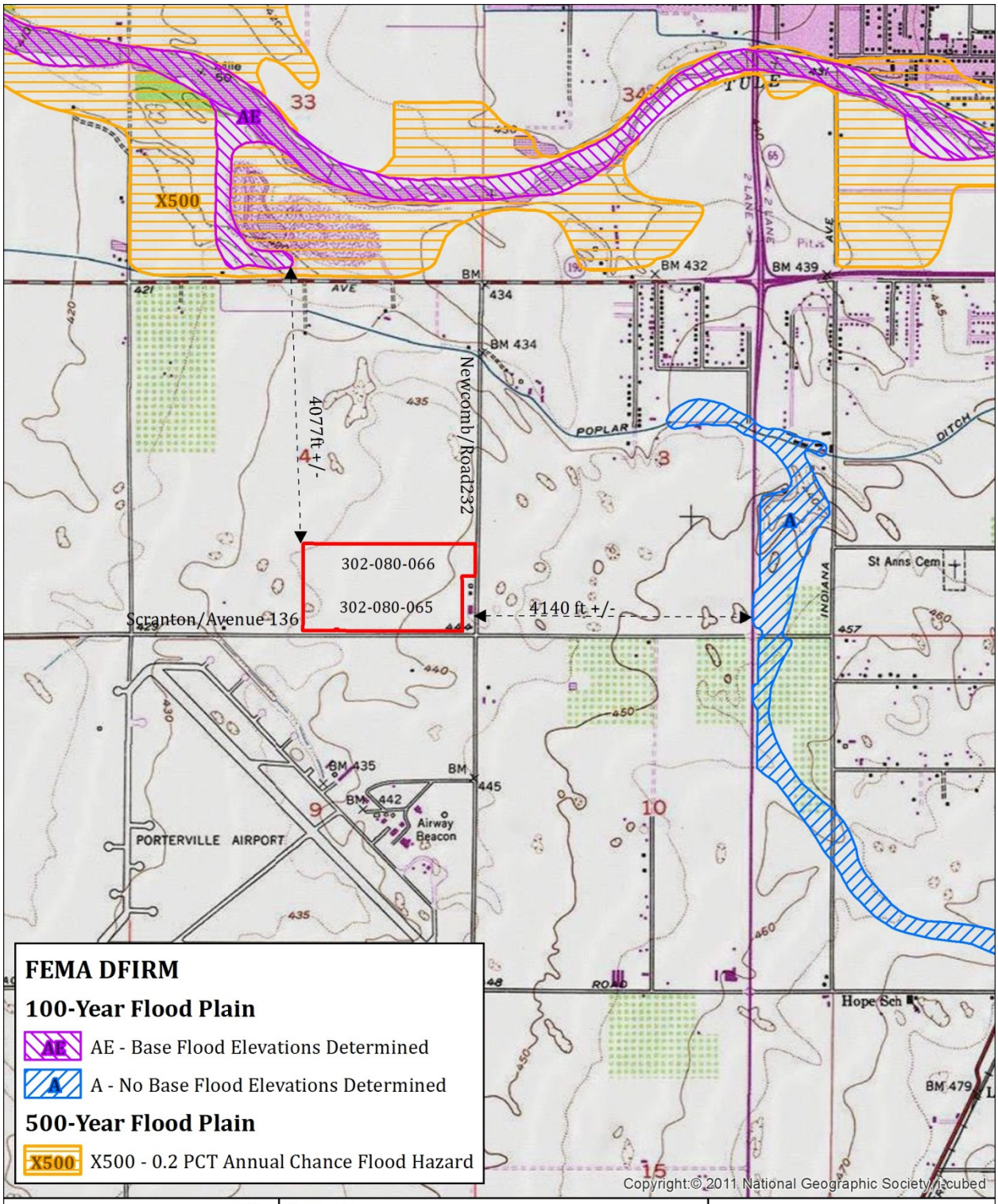
AE
X500
33
34
TULE
BM 432
BM 439
BM 434
Newcomb/Road232
4077ft +/-
POPLAR
DITCH
302-080-066
302-080-065
Scranton/Avenue 136
4140 ft +/-
St Anns Cem
INDIANA
PORTERVILLE AIRPORT
Airway Beacon
BM 435
BM 442
BM 445
Hope Sch
BM 479
Copyright © 2011 National Geographic Society, i-cubed
FEMA DFIRM
100-Year Flood Plain
AE - Base Flood Elevations Determined
A - No Base Flood Elevations Determined
500-Year Flood Plain
X500 - 0.2 PCT Annual Chance Flood Hazard
0 1,000 2,000 Feet
Legend
Project Site
FIRM Panel 06107C1641E
effective date: 6/16/2009
Porterville Quad (1:24,000)
PLSS: T22S R27E, S4 (S 1/2 of SE 1/4)
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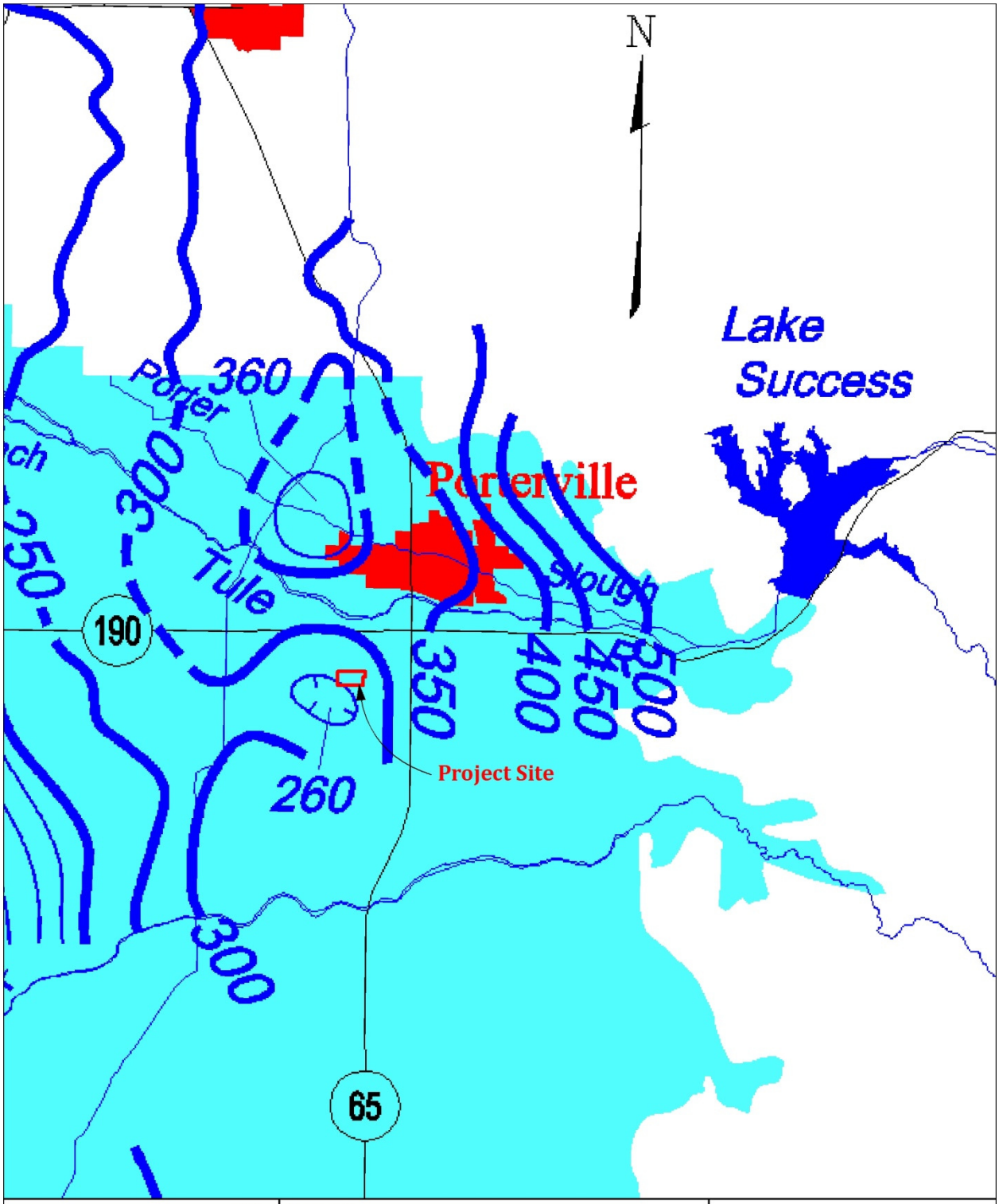
Figure 5
FEMA Flood Plain Map
South County Detention Facility


N
Lake
Success
Porterville
Porter
Tule
Slough
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300
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350
400
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190
65
Project Site
0 1 2 Miles
Legend
Project Site
Department of Water Resources
Spring 2010 Water Surface Elevation
Figure 6
DWR Groundwater Map
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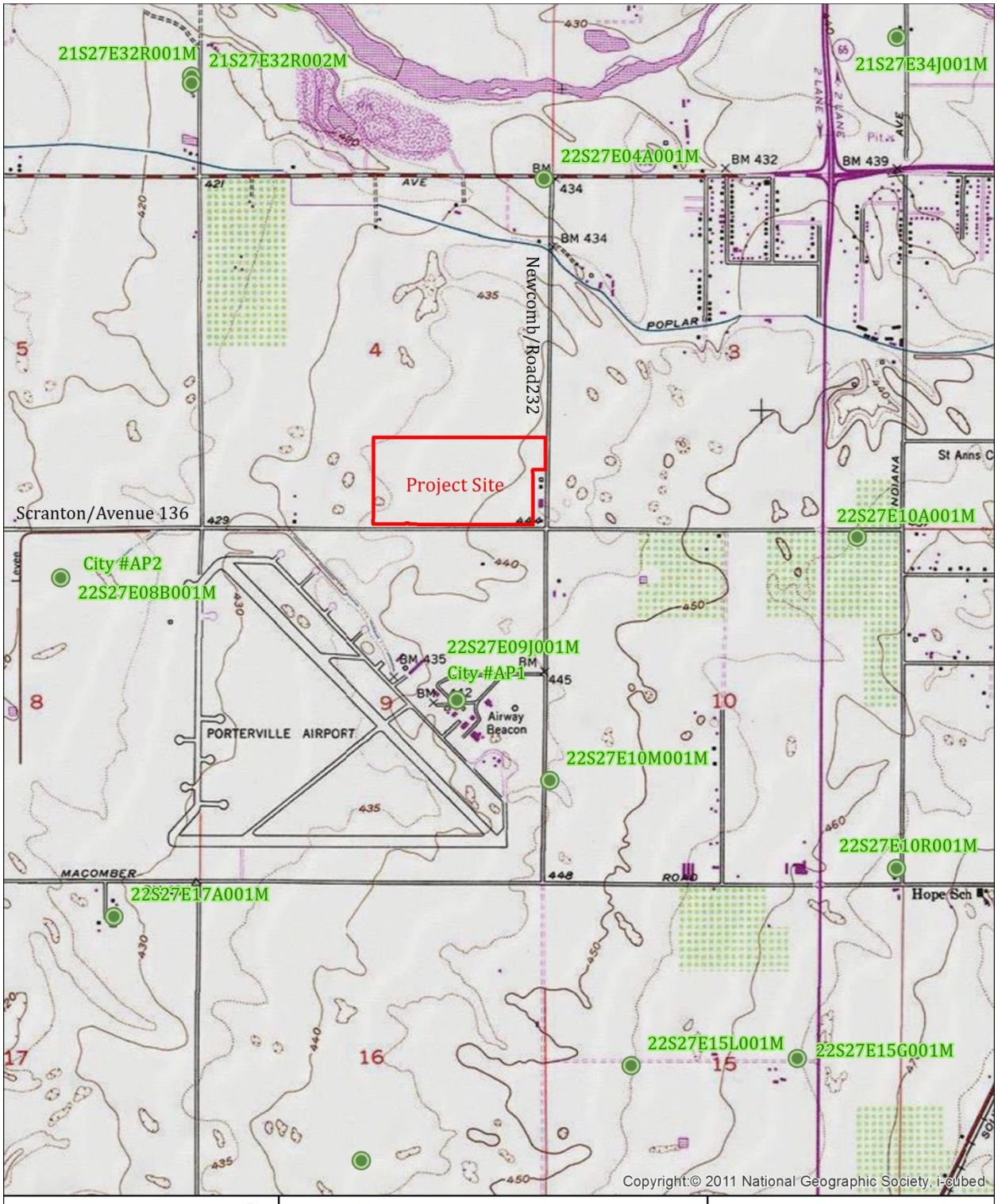
21S27E32R001M
21S27E32R002M
21S27E34J001M
22S27E04A001M
BM 432
BM 439
BM 434
BM 434
Newcomb/Road232
POPLAR
Project Site
Scranton/Avenue 136
22S27E10A001M
City #AP2
22S27E08B001M
22S27E09J001M
City #AP1
BM 435
BM 445
Airway Beacon
PORTERVILLE AIRPORT
22S27E10M001M
22S27E10R001M
MACOMBER
22S27E17A001M
Hope Sch
22S27E15L001M
22S27E15G001M
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Legend
DWR Well Location
Project Site
Figure 7
Well Locations Near Airport
South County Detention Facility
2/28/2013 V:\Clients\Tulare County - 1399\139913V1-South County Detention Facility\GIS\Map\figure7_well_locations.mxd

Success Reservoir is located on the Tule River and provides flood prevention and storage of irrigation water.[33] The Tule River Associates and the U.S. Army Corps of Engineers run water from Success Reservoir through the Tule River and Porter Slough, providing important groundwater recharge.

The City began its recharge program in 2007 and plans to continue increasing the amount of surface water purchased and recharged into the groundwater to ensure water balance. Planned groundwater recharge will help to ensure that municipal wells can provide the same yield in normal, single dry, and multiple dry years. The groundwater basin within the City stores water to meet seasonal and drought year demand. With a typical groundwater recharge program, water is drawn from groundwater reserves during periods of drought or during emergency situations, and groundwater is replenished in wet years with surplus imported water. Groundwater recharge programs enhance a region's ability to meet water demand during years of short supply and increase the reliability of local water supplies. Groundwater recharge programs may utilize reclaimed water. The City plans to continue recycling all of its effluent. The City will consider additional water detention basins which can serve for both storm water detention and groundwater recharge.[34]

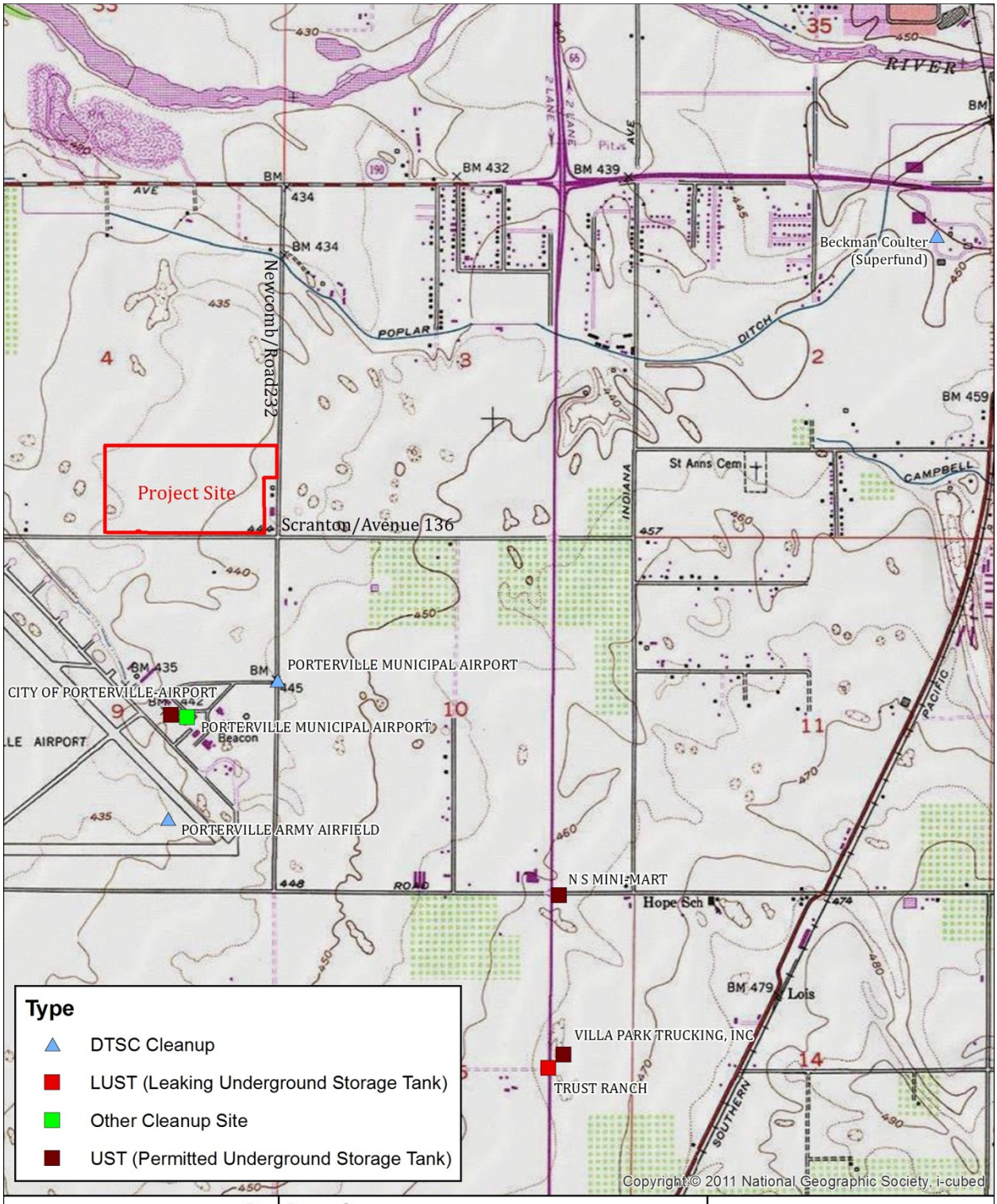
2.2.4 – Groundwater Quality

Groundwater quality in the Porterville area is generally better on the western edge; hence, most production wells are placed in this area. A few wells have been shut down due to water quality problems such as wells adjacent to Porter Slough due to perchloroethylene (**PCE**) contamination. A few wells in the downtown area have experienced nitrate problems. All active municipal wells produce water that meets State and Federal drinking water quality standards. The City does not presently provide treatment for any well water.[35]

City of Porterville water comes from 34 municipal water wells located throughout the city. The most recent Consumer Confidence Reports were reviewed for 2010 and 2011. Laboratory analytical results for USEPA and State Department of Health Services prescribed testing are provided. While not every constituent is tested every year, average results were generally below the California EPA Public Health Goal (**PHG**) threshold (no known or expected risk to health). Exceptions include the volatile organic compound PCE, synthetic organic contaminant dibromochloropropane (DBCP), and radionuclides gross alpha and uranium. Although above the PHG, the same average results were below the maximum contaminant level (**MCL**) (the highest level of a contaminant allowed in drinking water). General mineral results were also below the aesthetic secondary standard MCL with the general indicator constituents of electrical conductivity and total dissolved solids averaging 384 micromhos per centimeter (**µmhos/cm**) and 214 milligrams per liter (**mg/L**), respectively.[36]

Hazardous waste site databases were reviewed for sites near the Project. Other than the Porterville Airport, there are no sites within a one mile radius of the Project (**Figure 8**). There is

[33] Ibid.
[34] City of Porterville, "Hydrology & Water Quality," *Porterville DEIR 2030 General Plan* (2007)
[35] Ibid.
[36] Ibid, *Consumer Confidence Reports*, 2010 and 2011.



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PROVOST& PRITCHARD CONSULTING GROUP
An Employee Owned Company
286 W. Cromwell Ave.
Fresno, CA 93711-6162
(559) 449-2700

Legend

Project Site

Data Sources: GeoTracker (State Water Board)
EPA CIMC (Cleanups in My Community)

Figure 8

Environmental Cleanup Site Map

South County Detention Facility

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a Superfund site located within two miles of the Project site, placing the Project within the former plume. The CTL report indicates that the plume has been remediated to below cleanup levels and remediation efforts have been reduced to monitored natural attenuation.[37]

Additionally, site-specific data collected from an on-site well by CTL indicates that of the constituents analyzed, groundwater beneath the site meets State and Federal drinking water quality standards. CTL makes note of one exception: nitrogen exceedances above the MCL. CTL reports that the total nitrate/nitrite as N is above the MCL at 31.0, 20.1, and 25.7 mg/L in the wells sampled. The laboratory reports nitrate at those values but since the MCL for nitrate (NO_3) is 45 mg/L, the nitrate values are not an exceedance. The MCL for nitrate as nitrogen (NO_3-N) is 10 mg/L. The slight difference in nomenclature is often a point of confusion, but the laboratory reports clearly indicate nitrate, not nitrate-N.[38] Therefore, the CTL's site specific groundwater testing is generally consistent with the City of Porterville *Consumer Confidence Reports*.

2.2.5 - Soils

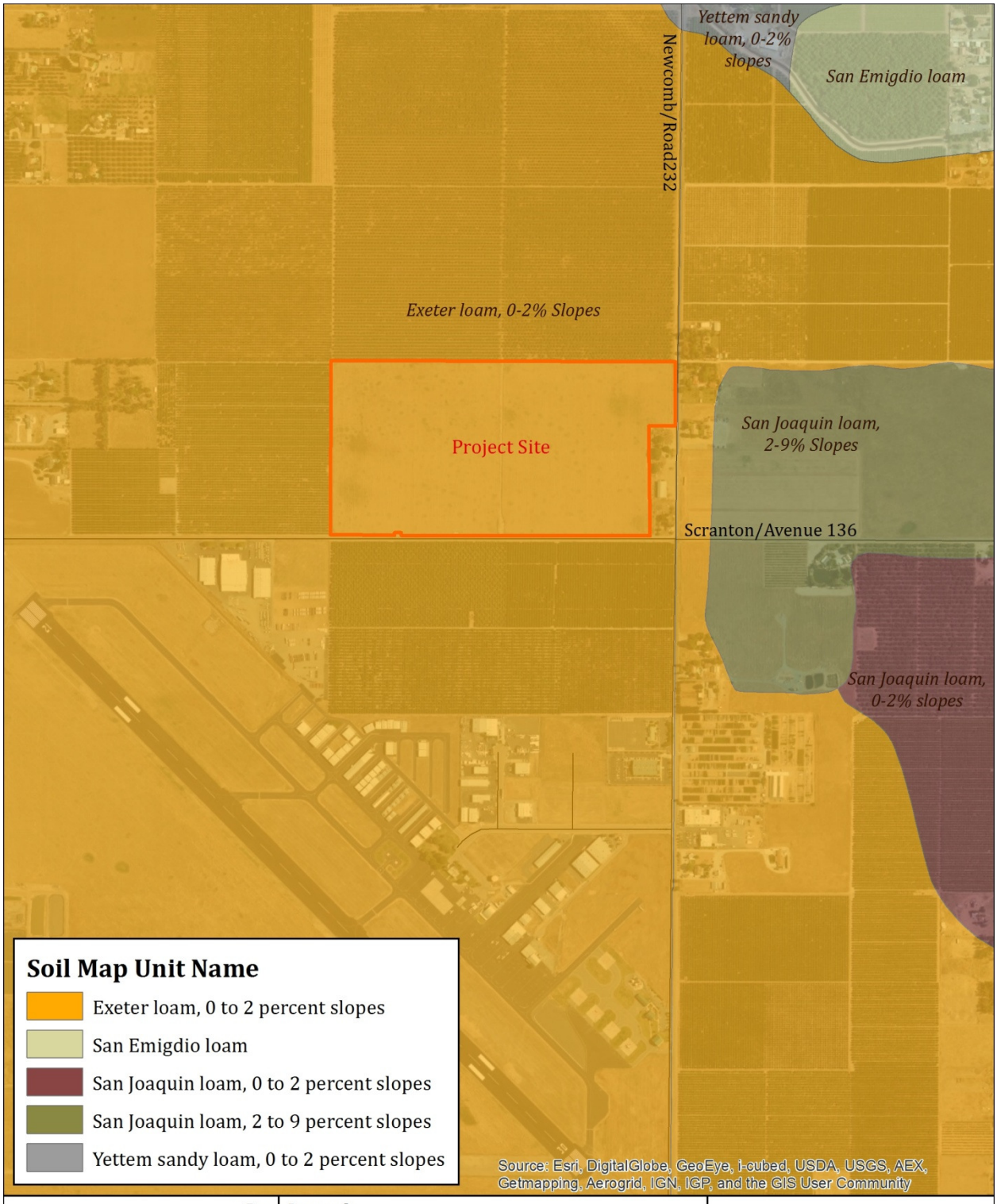
The soil characteristics of the Project site were identified using Natural Resource Conservation Service (**NRCS**) Web site.[39] The NRCS web soils survey determined that the Project site consists of one soil: the Exeter loam, which covers 100 percent of the site (**Figure 9**). The typical profile of the Exeter loam indicates it ranges from loam, sandy clay loam, clay loam, to very gravelly coarse sand to gravelly loam depending on depth. The soil, in typical profile, is up to 72 inches thick and is indurated from 28 to 46 in depth. This soil is moderately well drained.[40]

2.2.6 - Dam Safety and Inundation Hazard

The nearest dam, Success Lake Dam, is overseen and maintained by the United States Army Corps of Engineers (**USACE**) and administered by the Sacramento District of the USACE's regional office located in the City. Construction of the earth-filled dam was completed in 1961. It spans 3,490 feet across the Tule River and is 156 feet high. When full, the lake holds 82,300 acre-feet of water with a surface area of 2,450 acres.[41]

Success Dam was originally designed to withstand an earthquake with a magnitude of 8.3. However, it was built before the process of seismic liquefaction on earth-fill dams was completely understood.[42] The dam is currently categorized by the USACE in the second riskiest class of dams. The USACE has been studying alternatives to re-construct and widen the dam and bring it up to federal safety standards, and began purchasing properties immediately

[37] CTL-SEE's, Inc., *Hydrogeologic Investigation, South County Detention Facility Project, Porterville, California*, 2013.
[38] Ibid
[39] U.S. Department of Agriculture, Natural Resource Conservation Service, *Web Soil Survey* http://websoilsurvey.nrcs.usda.gov/app/, 2013.
[40] U.S. Department of Agriculture, Natural Resource Conservation Service, "Web Soil Survey," http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx., 2009.
[41] California Department of Water Resources, Division of Safety of Dams, *Owned and Operated by Federal Agencies*, 2009.
[42] City of Porterville, *Porterville 2030 General Plan DEIR*, Chapter 3.10, "Hydrology and Water Resources," 2007.


Yettem sandy loam, 0-2% slopes
San Emigdio loam
Newcomb/Road232
Exeter loam, 0-2% Slopes
Project Site
San Joaquin loam, 2-9% Slopes
Scranton/Avenue 136
San Joaquin loam, 0-2% slopes
Soil Map Unit Name
Exeter loam, 0 to 2 percent slopes
San Emigdio loam
San Joaquin loam, 0 to 2 percent slopes
San Joaquin loam, 2 to 9 percent slopes
Yettem sandy loam, 0 to 2 percent slopes
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community
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CONSULTING GROUP
An Employee Owned Company
286 W. Cromwell Ave.
Fresno, CA 93711-6162
(559) 449-2700
Legend
Project Site
Data Source: USDA NRCS
Soil Survey, Central Tulare County (CA660)
Publication Date: 12/10/2007
Figure 9
Soil Map
South County Detention Facility
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downstream of the dam.[43] As recent as April 2012, the USACE was still in the process of evaluating the safety of Success Dam, but has allowed 56,000 acre feet of water to be held in the reservoir, a 27,000 acre foot increase over the initial maximum allowed volume in 2004.[44]

According to a 2004 report prepared for USACE, approximately 40 percent of the City is located within the Success Dam inundation area. This inundation area runs through Porterville to a location downstream of Corcoran, a distance of approximately 44 miles. Although subsequent infrastructure and drainage improvements have reduced the threat of flooding in many areas prone to inundation, the City requires a flood certificate and appropriately raised floor plates for any development proposed in an identified special flood hazard area. Based on the reservoir at full capacity, the proposed Project is not located within the Success Dam inundation area. [45]

[43] Col. William J. Leady, "Corps updates Success Dam status," *The Porterville Recorder*, November 12, 2011, http://www.recorderonline.com/articles/months-50795-past-status.html.

[44] Rick Elkins, "Corps to allow more water in Success Lake", *The Porterville Recorder*, April 03, 2012, http://www.recorderonline.com/articles/acre-52271-corps-success.html

[45] City of Porterville, *Porterville 2030 General Plan DEIR*, Chapter 3.10, "Hydrology and Water Resources," 2007.

Section 3 – Regulatory Plans and Policies

3.1 – Federal Regulations

3.1.1 - Clean Water Act

The Clean Water Act (**CWA**) was designed to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.[46] The CWA also directs states to establish water quality standards for all "waters of the United States" and to review and update such standards on a triennial basis. Other provisions of the CWA related to basin planning include Section 208, which authorizes the preparation of waste treatment management plans, and Section 319, which mandates specific actions for the control of pollution from nonpoint sources. The U.S. EPA has delegated responsibility for implementation of portions of the CWA to the State Water Resources Control Board (**SWRCB**) and the Regional Water Quality Control Boards (**RWQCB**), including water quality control planning and control programs, such as the National Pollution Discharge Elimination System (**NPDES**) program.

The CWA requires states to adopt water quality standards for all surface waters of the United States. The CWA requires the U.S. EPA to publish water quality criteria that accurately reflects the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based upon biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards. The CWA requires states to adopt numerical water quality standards for toxic pollutants for which the U.S. EPA has published water quality criteria and which reasonably could be expected to interfere with designated uses in a water body.[47]

Storm water discharges to "waters of the U.S." are regulated under the CWA. The storm water discharges for the Project will be collected by multiple inlets to the storm drain system.

The NPDES permit system was established in the CWA to regulate both point-source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the United States. For point-source discharges, each NPDES Phase II permit contains limits on allowable concentrations and pollutants contained in the discharge. For nonpoint source discharges, the NPDES program establishes a comprehensive stormwater quality program to manage urban stormwater and minimize pollution of the environment to the maximum extent practicable. The NPDES program consists of (1) characterizing receiving water quality, (2) identifying harmful constituents, (3) targeting potential sources of pollutants, and (4) implementing a comprehensive stormwater management program. The proposed project would obtain and comply with the regulatory requirements of the NPDES permit program.

[46] U.S. Code, Title 42, Sec. 1251, The Clean Water Act.
[47] U.S. Code, Title 42, The Clean Water Act, Section 303(c)(2)(b).

3.1.2 - Flood Disaster Protection Act of 1973

Congress acted to reduce the costs of disaster relief by passing the Flood Disaster Protection Act of 1973.[48] The act's aim was to expand the national flood insurance program by substantially increasing limits of coverage and the total amount of insurance authorized to be outstanding. The act also required known flood-prone communities to participate in the program. Other purposes of the act were to substantially increase the limits of coverage authorized under the national flood insurance program; provide for the expeditious identification of, and the dissemination of information concerning, flood-prone areas; require state or local communities, as a condition of future federal financial assistance, to participate in the flood insurance program and to adopt adequate flood plan ordinances with effective enforcement provisions consistent with federal standards to reduce or avoid future flood losses; and require the purchase of flood insurance by property owners who are being assisted by federal programs or by federally supervised, regulated, or insured agencies or institutions in the acquisition or improvement of land or facilities located or to be located in identified areas having special flood hazards.

3.1.3 - National Flood Insurance Act

Congress acted to reduce the costs of disaster relief by passing the National Flood Insurance Act of 1968.[49] The intent of this act was to reduce the need for large, publicly funded flood control structures and disaster relief efforts by restricting development in floodplains.

The regulations of the National Flood Insurance Program[50] (**NFIP**), which is administered by FEMA, require that communities adopt land use restrictions for the 100-year floodplain in order to qualify for federally subsidized flood insurance. The type of restrictions communities must adopt are listed in some detail in the regulations. Included is a requirement that residential structures be elevated above the level of the 100-year flood and that other types of structures be flood-proofed. Participation in the flood insurance program is virtually mandatory, since flood insurance (within identified "special flood hazard" areas) is a prerequisite for receiving mortgages or construction loans from federally regulated lending institutions. As described above, approximately 40 percent of the City is located within the special flood hazard area associated with the Success Dam.[51] Disaster assistance was not available to public agencies in hazard areas if they did not participate in the program. FEMA issues Flood Insurance Rate Maps (FIRMs) of communities participating in the NFIP. These maps delineate flood hazard zones in each participating community.

[48] Ibid., Section 4002, The Flood Disaster Protection Act of 1973.

[49] U.S. Code, Title 42, Section 4001 et. seq., The National Flood Insurance Act of 1968.

[50] National Flood Insurance Program, Federal Emergency and Management Agency, http://www.fema.gov /library/viewRecord.do?id=1480, 2002.

[51] City of Porterville, *Porterville 2030 General Plan DEIR*, Chapter 3.10, "Hydrology and Water Resources," 2007.

3.2 – State Regulations

3.2.1 - California Water Code

All projects resulting in discharges, whether to land or water, are subject to the California Water Code[52] and are required to obtain approval of Waste Discharge Requirements (WDRs) by the RWQCBs. Land-and groundwater-related WDRs (i.e., non-NPDES WDRs) regulate discharges of process and wash-down wastewater and privately or publicly treated domestic wastewater. WDRs for discharges to surface waters also serve as NPDES permits.[53]

Prior to the issuance of any construction/grading permit—and/or the commencement of any clearing, grading, or excavation—owners of projects with construction activities that require a grading permit must prepare and submit a stormwater pollution prevention plan (SWPPP). Landowners are responsible for obtaining and complying with the General Construction NPDES Permit, but may delegate specific duties to developers and contractors by mutual consent. The purpose of the SWPPP is to identify potential pollutant sources that may affect the quality of discharges and to design the use and placement of best management practices (BMPs) to effectively prohibit the entry of pollutants from the construction site into the storm drain system. A stormwater pollution prevention plan (SWPPP) prepared in compliance with the General Construction NPDES Permit describes the site, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of post-construction stormwater management measures and maintenance responsibilities, training of staff, a list of contractors and subcontractors, and non-stormwater management controls. Dischargers are also required to inspect construction sites before and after storms to identify stormwater discharge from construction activity, and to identify and implement controls where necessary. The project would be required to prepare and execute a SWPPP prepared in compliance with the NPDES permit.

3.2.2 - Colby-Alquist Flood Control Act

The Colby-Alquist Flood Control Act[54] establishes how local governments are to develop and implement flood plain management plans. Among other things, the act makes a number of separate legislative findings and requires regulation as a condition for state assistance on federally authorized flood control projects.

3.2.3 - Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act[55] authorizes the SWRCB to adopt, review, and revise policies for all waters of the state (including both surface water and groundwater), and directs the RWQCB to develop regional basin plans. The California Water Code[56] also authorizes the SWRCB to adopt water quality control plans on its own initiative.

[52] California Water Code, et seq
[53] California Water Code, Section 13263.
[54] California Water Code, Section 8590 et seq.
[55] Ibid., Division 7, Section 13000
[56] Ibid., et seq.

3.2.4 - State Water Quality Control Board

Responsibility for the protection of surface water quality in California rests with the SWRCB and nine RWQCBs. The City of Porterville lies within the jurisdiction of the Central Valley RWQCB. The SWRCB establishes statewide policies and regulations for the implementation of water quality control programs mandated by federal and state water quality statutes and regulations. The RWQCBs develop and implement water quality control plans (basin plans) that consider regional beneficial uses, water quality characteristics, and water quality problems. The Central Valley RWQCB Basin Plan also provides strategies and implementation plans for the control of point-source and nonpoint-source pollutants, the remediation of pollution, and the monitoring and assessment of a region's waters. The Basin Plan implements a number of federal and state laws, the most important of which are the state Porter-Cologne Water Quality Control Act and the federal Clean Water Act. The City of Porterville is responsible for ensuring that new developments are in compliance with the goals and policies contained in the Central Valley RWQCB Basin Plan. The Basin Plan was prepared to conform with statewide policy set forth by the legislature and the State Water Resources Control Board. Basin plans consist of designated beneficial uses to be protected, water quality objectives to protect those uses, and a program of implementation needed for achieving the objectives.

Implementation of regulations related to surface water is accomplished through the issuance of NPDES permits, which are issued by the RWQCB for point sources, storm drains, and construction sites. The RWQCB establishes requirements prescribing the discharge limits and establishes water quality objectives through the Porterville Stormwater Management Program,[57] pursuant to the Central Valley Storm Water Program.[58] As part of the permit application to be submitted to the Central Valley RWQCB, the City storm water management program (**SWMP**) addresses six minimum control measures (**MCMs**):

- public education and outreach
- public involvement and participation
- illicit discharge detection and elimination
- construction site storm water runoff control
- post-construction storm water management
- pollution prevention and good housekeeping

3.3 – Local Regulations

The Central Valley RWQCB also regulates all municipal wastewater discharges to protect the quality and beneficial uses of groundwater and surface water resources, to maximize reclamation and reuse, and to eliminate waste associated health hazards. The County Environmental Health Department issues permits, collects fees, and enforces standards within the City limits.

[57] City of Porterville, *Storm Water Management Program*, 2006.

[58] State Water Resource Control Board, *Program Reports, Storm Water Program*, Executive Officer's Report 3, December 2004; City of Porterville, *Storm Water Management Program*, Appendix E, 2006.

The City's Public Works Department's Field Services Division provides sewer infrastructure, wastewater treatment, land used for water reclamation purposes, and storm drainage facilities. Public Works maintains the Water System Master Plan, Sewer System Master Plan,[59] and Storm Drainage Master Plan.[60]

3.3.1 - City of Porterville 2030 General Plan

The Open Space and Conservation Element of the Porterville 2030 General Plan[61] and the Public Health and Safety Element[62] contain guiding policies and implementation policies directed at protecting people and property from hazards of flooding and maintaining surface and groundwater quality. Pertinent policies include the following:

Guiding Policies

OSC-G-8 Ensure adequate water quality and supply for the entire Porterville community.

Implementation Policies

OSC-I-37 Establish watershed protection standards and review procedures in the Zoning Ordinance to protect groundwater resources.

OSC-I-38 Continue to work with the RWQCB for short- and long-term solutions for excessive salts in the groundwater, and maintain a valid RWQCB permit for all wastewater treatment operations.

OSC-I-39 Adopt the RWQCB's policies on soil disturbance activities in order to minimize the disturbance of soil, vegetation, organic debris, and other materials that control runoff.

OSC-I-40 Support the identification of degraded surface water and groundwater resources and promote restoration where appropriate.

OSC-I-41 Monitor and enforce provisions to control non-point source water pollution, including storm water flows, contained in the United States Environmental Protection Agency NPDES program as implemented by the RWQCB.

OSC-I-42 Support the collection of monitoring data for facilities or uses that are potential sources of groundwater pollution as part of project approvals, including residential and industrial development.

OSC-I-43 Work with agricultural and industrial uses to ensure that water contamination and waste products are handled in a manner that protects the long-term viability of water resources.

[59] City of Porterville, *Sewer System Master Pla*n, February 2001
[60] Ibid., Council Agenda, *Amendment to Storm Drain Master Plan, City Standard Plans and Specifications – Drainage Reservoir Design Criteria*, March 3, 2009.
[61] City of Porterville, *2030 General Plan*, March (2008) 134.
[62] Ibid., *2030 General Plan,* Chapter 7, "Public Health and Safety Element," (2008) 162.

OSC-I-44 Work with the RWQCB to ensure that all point source pollutants are adequately mitigated (as part of the CEQA review and project approval process) and monitored to ensure long-term compliance.

OSC-I-45 Continue to require use of feasible and practical best management practices (BMPs) and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities and urban runoff in coordination with the RWQCB.

OSC-I-46 Adopt water well standards meeting the requirements of the state with Department of Water Resources.

OSC-I-47 Prepare a Groundwater Management Plan and develop groundwater monitoring programs with federal, state, and local agencies and the private sector to improve local groundwater pollution detection and monitoring.

OSC-I-50 Do not allow new septic systems within the City unless wastewater collection facilities are unavailable and the applicant agrees to connect when permanent facilities are constructed.

OSC-I-51 Prior to the approval of individual projects, require the City Engineer and/or Building Official to verify that the provisions of applicable point source pollution programs have been satisfied.

OSC-I-52 Establish requirements for appropriate Best Management Practices to be implemented during construction efforts to control the discharge of pollutants, prevent sewage spills, and avoid discharge of sediments into streets, storm-water conveyance channels, or waterways.

Guiding Policy

PHS-G-2 Protect the community from risks to life and property posed by flooding and stormwater runoff.

Implementation Policies

PHS-I-7 Coordinate with the U.S. Army Corps of Engineers, the County and local irrigation districts on potential flooding risks, including risks associated with dam failure. *This will include coordination on training to respond to catastrophic dam failure, and maintaining adequate storm drainage capacity in the Tule River and Porter Slough.*

PHS-I-8 Implement appropriate flood control measures to assure the safety of residents, while emphasizing maintenance of natural wildlife habitats and vegetation.

PHS-I-9 Require new development to provide for the perpetual funding and ongoing maintenance of detention reservoirs. Maintenance may be by the City under contract, by a private entity, or by another public agency.

PHS-I-10 Continue to require any new development in the floodway to obtain a permit from the California Reclamation Board and enforce the Flood Damage Prevention Ordinance.

PHS-I-11 Coordinate with appropriate agencies to ensure that new bridges are constructed according to acceptable standards and maintained to avoid flood damage.

PHS-I-12 Continue to participate in the National Flood Insurance Program and encourage all property owners within flood hazard areas to carry flood insurance.

3.3.2 - Municipal Code

Storm Drainage Systems Ordinance

The City of Porterville's Storm Drainage Systems Ordinance[63] provides for the planning, engineering, administration, and construction of storm drainage systems to be constructed within public streets, alleys, easements or property and which benefit the general area as whole, and are required for the health, safety, and welfare of the residents of the City.[64] Storm drainage systems include all necessary ROW, property, and improvements specifically intended for the conveyance and/or retention of storm water runoff excluding street improvements.

Storm Drainage Fees

Before development or redevelopment of any property, there shall be paid a storm drainage systems acreage charge in accordance with the cost per acre as established by resolution of the City Council.[65] The charge shall be used to reimburse the City for construction of storm drainage systems, to provide the City with funds for construction of storm drainage systems, and to reimburse others who have constructed or advanced the cost of construction of storm drainage systems. The charge shall be paid to the City prior to the development or redevelopment of any property and the issuance of any permits to develop or redevelop such property. However, the charge shall not apply to redevelopment of any property unless the cost of said redevelopment exceeds $15,000 within a 12-month period.[66] Property for which development or redevelopment is being proposed and has already had the charge paid to the City, will not again be subject to the charge.

The charge shall be computed on the gross area of the property being improved, such area being defined as the parcel of land being developed or redeveloped including half of all adjacent dedicated streets and alleys, and all of interior dedicated streets and alleys.

[63] City of Porterville, City Code, Chapter 19A, "Storm Drainage Systems."
[64] Ibid., Chapter 19A-4, "Storm Drainage Systems."
[65] City of Porterville, Municipal Code, Chapter 19A-11, Article 2, "Acreage Charge."
[66] Ibid., Chapter 19A-11, "Acreage Charge."

In order to implement the goals and objectives of the Storm Drain Master Plan[67] for the City, and to provide needed storm drainage facilities for new development in the City, certain public storm drain facilities must be constructed.[68]

[67] Ibid, Council Agenda, *Amendment to Storm Drain Master Plan, City Standard Plans and Specifications – Drainage Reservoir Design Criteria,* March 3, 2009.
[68] Ibid., Chapter 19A. Article 5. Section 40. "Acreage Fee."

Section 4 – Environmental Analysis

4.1 – Thresholds of Significance

In order to assist in determining whether a project will have a significant effect on the environment, the *State CEQA Guidelines* (Appendix G) [69] identify criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions.

Under the following thresholds, a project may be deemed to have a significant impact if it would

- violate any water quality standards or waste discharge requirements*;*
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted*)*;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- otherwise substantially degrade water quality;
- place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or
- be subject to inundation by seiche, tsunami, or mudflow.

4.2 – Project Impacts

The Evaluation of Environmental Impacts pursuant to Appendix G of the CEQA Guidelines resulted in no potential impacts to hydrology and water quality associated with construction and operation of the proposed project with the exception of the following:

Impact: **Construction at the project site has the potential to degrade water quality in receiving waters but such degradation would not be substantial and would not alter existing drainage patterns, cause increased erosion or sedimentation, or**

[69] California Environmental Quality Act, *State CEQA Guidelines*, Appendix G, 2009, 277–291

violate any water quality standards or waste discharge requirements. ***This impact is considered less than significant.***

Review of Figure 7-1, Geological and Soil Hazards, from the Public Health and Safety Element [70] and Figure 6-4, Special Status Species and Sensitive Vegetation, from the Open Space and Conservation Element[71] of the Porterville 2030 General Plan indicates the Project is relatively flat and does not contain a natural stream or drainage course that would be altered by grading. Existing drainage across the site is largely sheetflow with no defined pattern.

As described in the **Section 1.2 Project Description,** the Project site is characterized by vacant and disturbed land, relatively flat, with a gentle gradient to the west. Construction associated with the development of the Project would result in limited land-disturbing activities such as excavation and trenching for utility and infrastructure installation, but would not disturb the course of any river or stream, as none exist on site. When portions of the Project site are excavated or otherwise disturbed by construction activities, the potential for soil erosion and sedimentation in runoff discharging from the construction site would substantially increase during a rainstorm.

To reduce or eliminate construction-related water quality effects, the City of Porterville would require future contractors to obtain coverage under the NPDES General Construction Permit and include erosion and sediment control plans. As a performance standard, General Construction Permit require controls of pollutant discharges that use best available technology (**BAT**) that is economically achievable, best conventional pollutant control technology (**BCT**) to reduce pollutants, and any others stringent controls necessary to meet water quality standards. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other nonpoint source runoff.

Measures range from source controls, such as reduced surface disturbance, to treatment of polluted runoff, such as detention or retention basins. BMPs to be implemented as part of the General Construction Permit may include, but are not limited to, the following measures:

- The employment of temporary erosion and sediment control measures (such as straw mulch and tackifier, silt fences, staked wattles, silt/sediment basins and traps, check dams, geofabric, and temporary revegetation or other ground cover) to control erosion and sedimentation from disturbed areas.
- The protection of drainage facilities in downstream off-site areas from sediment using temporary structural BMPs, such as sediment barriers, erosion control blankets, mulch, and mulch tackifier, as needed to stabilize disturbed areas until vegetation becomes established.
- The establishment of grass or other vegetative cover or other approved erosion control measures will be established on the construction site as soon as possible after disturbance such that no disturbed surfaces will be left without erosion control measures in place.

[70] City of Porterville, *2030 General Plan*, (2008) 155.
[71] Ibid.,129.

In addition, construction equipment would have the potential to leak polluting materials, including oil and gasoline. Improper use of fuels, oils, and other construction-related hazardous materials such as pipe sealant may also pose a threat to surface or groundwater quality. However, BMPs will minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. Prior to the issuance of a grading permit, the applicant would be required to file a Notice of Intent (**NOI**) with the CVRWQCB, thereby providing notification and intent to comply with the State of California general permit. Prior to issuance of the first grading permit, a Storm Water Pollution Prevention Plan (**SWPPP**) must be completed for on-site and associated off-site construction activities. The City of Porterville Storm Water Management Program shall be used as the basis for the SWPPP. A copy of the permit shall be submitted to the City Public Works Department prior to the start of grading activities. A copy of the SWPPP must be available and implemented at the construction site at all times. The SWPPP outlines the source control and/or treatment control best management practices (**BMPs**) that will avoid or mitigate runoff pollutants at the construction site to the "maximum extent practicable."

Compliance with the NPDES permit, preparation and implementation of a SWPPP, and the filing of a NOI with the CVRWQCB, would ensure that any impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant.

Impact **Operation of the proposed project has the potential to degrade water quality in receiving waters but such degradation would not be substantial and would not violate any water quality standards or waste discharge requirements. *This impact is considered to be less than significant.***

The proposed commercial land use would introduce urban runoff, which may contain water pollutants, including suspended solids, bacteria, heavy metals, oxygen-demanding substances, nutrients, and oil and grease. The primary sources of urban pollutants include pavement runoff (gasoline, oil and similar petroleum products).[72] These contaminants would be carried into the local drainage system by surface water runoff.

Under existing regulations, the City must develop, implement, and enforce a program to address stormwater runoff from new development projects that disturb greater than or equal to 1 acre, including projects less than 1 acre that are part of a larger common plan of development or sale or that discharge into the small MS4. An "MS4" is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is

[72] Robert A. Corbitt, *Standard Handbook of Environmental Engineering,* (New York City: McGraw-Hill Publishing Company, 1989), 753

- designed or used for collecting or conveying storm water;
- not a combined sewer; and
- not part of a Publicly Owned Treatment Works (**POTW**).[73]

The proposed Project must incorporate BMPs outlined in the design standards for commercial projects greater than 100,000 square feet as listed in the City's SWMP.[74] The program would ensure that controls that would prevent or minimize water quality impacts are in place. Stormwater runoff would sheetflow through the parking area until it is directed by curbs and gutters to a series of inlets. All runoff generated within the project location will be discharged into a City of Porterville storm drainage system. The method of conveyance within State ROW will be Caltrans standard concrete inlet structures connected by high-density polyethylene pipes and reinforced concrete pipe (**RCP**).[75] The on-site improvements would be constructed to the standards and specifications outlined by the City's Storm Drain Master Plan.

In summary, Storm Water Discharge Permits issued under the NPDES program require implementation of BMPs along with other regional measures to reduce potential pollution from the developed site as part of a regional program addressing urban stormwater quality. The proposed project would incorporate measures as needed and required.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant.

Impact **Commercial development of the project site would not substantially alter the existing drainage pattern, or substantially increase the rate or amount of surface runoff in a manner, which would exceed the capacity of the system result in flooding on or off site.** ***This impact is considered to be less than significant.***

As described in the **Section 1.2 Project Description**, the Project site is characterized by vacant and disturbed land that is relatively flat, with a gentle gradient to the west. Project. construction and operation of the project would not alter the course of a stream or river, as none exist on site.[76] Runoff presently sheet-flows across the site with no defined point of discharge.

Stormwater runoff would sheetflow across the paved areas until it is directed by curbs and gutters to a series of inlets. All runoff generated within the project location will be discharged into a City of Porterville storm drainage system. The City of Porterville Engineering Division reviews each development project for drainage conveyance and storage of stormwater.

[73] Code of Federal Regulations Title 40, Section 122.26(b)(8).
[74] City of Porterville. *Storm Water Management Program,* Appendix D. 2006.
[75] CEI Engineering Associates Inc., *Highway 190 Hydrology Report*, 2007.
[76] Impact Sciences, Inc., field survey, February 2009 (See **Section 5.2 Biological Resources).**

Needed on-site improvements would be constructed to the standards and specifications outlined by the City's Storm Drain Master Plan.

For these reasons, Project construction and occupation would not cause a significant impact by increasing runoff in a manner that would cause flooding either on or off site.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant.

Impact **The project would not place structures or housing, which would impede or redirect flood flows within a 100-year flood hazard area.** ***This impact is considered less than significant.***

The Project is located within the City and is approximately 1 mile south of the Tule River. As illustrated in **Figure 5,** the Project is located outside of the 100-year floodplain.[77] Since the project would not place structures within the 100-year floodplain, it would not impede or redirect flood flows. The Project is not located within Zone X500, or the 500-year flood zone, or within the inundation zone from Success Dam. A "special flood hazard area" is defined as an area located within FIRM zones designated as 100-year flood zones.[78] As the Project is not located within a 100-year flood zone, the Project is not considered to be in a special flood hazard area.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact **Construction and operation of the project would expose people or structures to a risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam.** ***This is considered to be a less than significant impact.***

A dam failure is usually the result of neglect, poor design, or structural damage caused by a major event such as an earthquake. Dams must be operated and maintained in a safe manner, which is ensured through inspections for safety deficiencies, analyses using current technologies and designs, and taking corrective actions as needed based on current engineering practices.

77 City of Porterville, 2030 General Plan, (2008) 163.

78 Ibid., City Code, Chapter 7, Article 14, Section 7-138, "Definitions."

The Project is located outside of the Success Dam inundation area, as illustrated in Figure 7-3 Flood Hazards map in the City of Porterville General Plan[79]. This inundation area runs through Porterville, to a location downstream of Corcoran, a distance of approximately 44 miles.[80] Although subsequent infrastructure and drainage improvements have reduced the threat of flooding in many areas prone to inundation, the City requires a flood certificate and appropriately raised floor plates for any development proposed in an identified hazardous flood zone. As previously noted, the Project is not located within the 100-year flood zone; therefore, it is not considered to be located in a special flood hazard area.[81]

Impacts related to exposure of people or structures to a risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact **The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.** ***This impact is less than significant.***

Implementation of the proposed Project would result in the development of an undeveloped lot which would result in an increase in impervious surfaces over existing conditions. Additional impervious surfaces would reduce the amount of groundwater recharge by limiting the percolation of rainwater on site. However, the main source of groundwater recharge for the Porterville area is the Tule River bottom and associated ditches.[82] Additionally, the City has available numerous surface water storage facilities to allow for future recharge areas should they be required. Therefore, development of the proposed Project would not significantly impact groundwater recharge, and impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Residual Impacts

Impacts would be less than significant.

79 Ibid., "Public Health & Safety Element." 2030 Porterville General Plan, Figure 7-3, "Flood Hazards," (2008) 163.

80 Ibid

81 City of Porterville, City Code, Chapter 7, Article 14, Section 7-138, "Definitions."

82 *City of Porterville 2030 General Plan EIR and the Porterville Urban Water Management Plan, 2007 Update.*

4.3 - Cumulative Impacts

The Evaluation of Cumulative Environmental Impacts pursuant to Appendix G of the CEQA Guidelines resulted in no impact with the exception of the following:

Impact **Build-out of the 2030 General Plan would result in increased non-point pollutant discharges, alterations to the drainage patterns by increasing impervious surface area, alterations to flood patterns by increasing development within the floodplain. *These impacts are considered less than significant.***

Construction and post-construction activities associated with implementation of the 2030 General Plan could result in specific storm drainage, wastewater, water quality, and flooding impacts, such as increased nonpoint pollutant discharges, alterations to the drainage patterns by increasing impervious surface area, and alterations to flood patterns by increasing development within the floodplain. In order to minimize these impacts, the following General Plan policies (OSC-I-41, OSC-I-44, OSC-I-45, OSC-I-51, and OSC-I-52)[83] focus on requiring future development projects to clean and minimize runoff into the City's drainage system, and establish development fees from development projects in order to pay for the construction and maintenance of the drainage system. Future project would be required to contribute to the City's development fees and comply with applicable general plan goals and policies. Hydrology impacts would be addressed on a project-specific basis. Future project would be required to comply with the requirements of the NPDES permit, which would ensure that water quality impacts would be mitigated. The proposed project's compliance with the NPDES/SWPPP permit programs will ensure that the project contribution to cumulative impacts would be less than significant.

Cumulative Mitigation Measures

No mitigation is required.

4.4 - Level of Significance After Mitigation

Potential hydrological and water quality impacts would be less than significant with no mitigation required.

[83] City of Porterville, *2030 General Plan*, (2008) 134.